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THE CAUSATION OF CONSUMPTION.

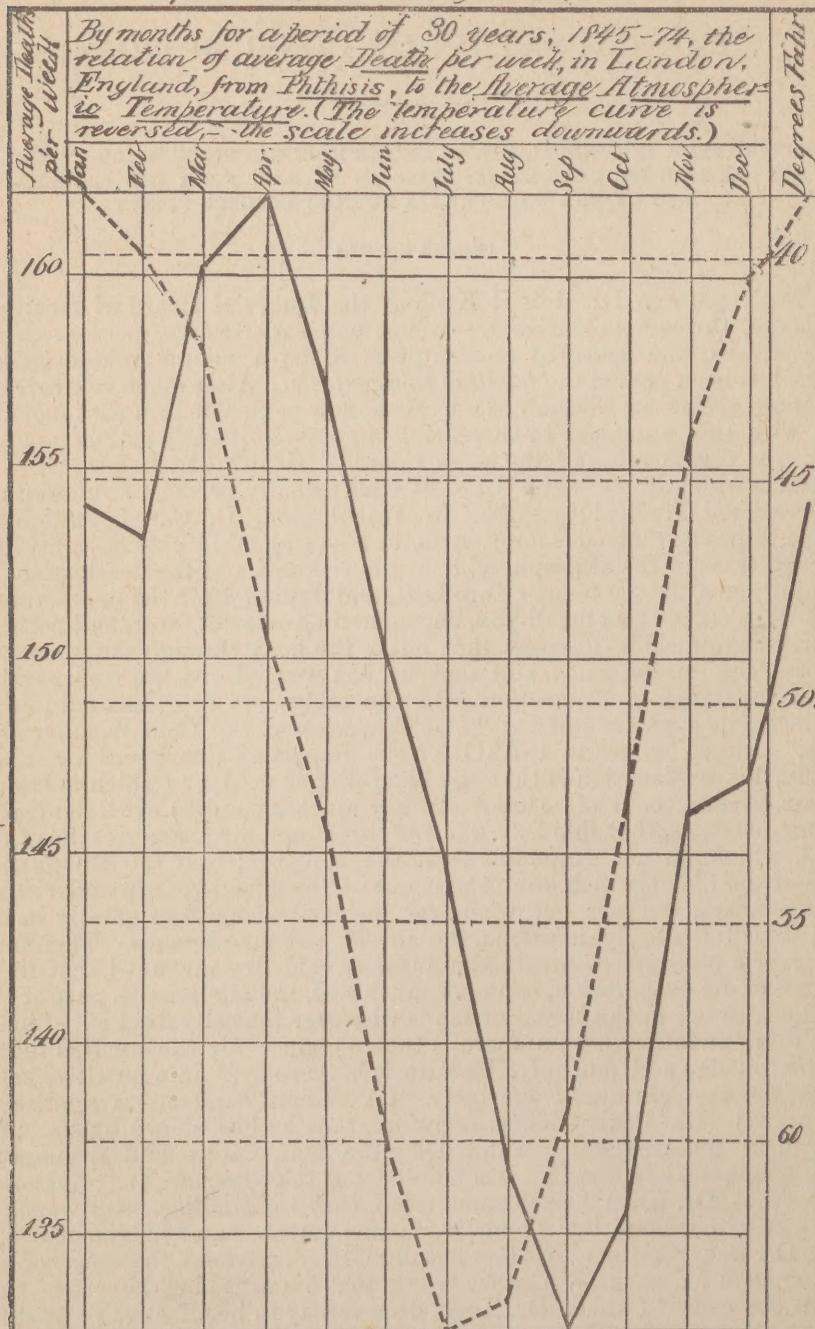
[REPRINTED FROM THE ANNUAL REPORT OF THE MICHIGAN STATE BOARD OF HEALTH,
FOR THE YEAR 1888, PAGE XXXIX; BEING AN EXTRACT FROM THE PROCEED-
INGS OF THE BOARD AT ITS MEETING OCTOBER 11, 1887.]

[Reprint No. 287.]

A few years ago Dr. Robert Koch of the Imperial Board of Health of Germany, through extensive researches and experiments discovered and demonstrated the cause of consumption to be a microscopic organism which has been named the *bacillus tuberculosis*. After much controversy, this now seems to be established. It is now acknowledged that *inoculation* with this organism in susceptible animals uniformly causes tuberculosis. At this meeting of the State Board of Health, Dr. Baker exhibited diagrams which illustrated a paper he read recently before a section of the International Medical Congress, in Washington, D. C.,* in which he claims to prove that consumption is, to a considerable extent, controlled by conditions of the atmosphere, both the sickness and the deaths rising a certain time after the temperature falls, and falling after the temperature rises. He claims that small-pox, and sometimes scarlet fever, and perhaps other communicable diseases that enter the body through the lungs and air-passages do the same, and that he has worked out the reasons why. [They are stated, in connection with the tables and diagrams exhibiting the facts, in a paper entitled "The Causation of the Cold Weather Diseases," printed on pages 197-211, of the Report of this Board for 1887.] Briefly, his explanation is that the breathing of cold air (which is always dry air, because cold air cannot contain much moisture) dries the throat and air-passages, that this leaves in the throat and air-passages salts of the blood, which do not evaporate with the moisture; that the albuminous parts of the blood, which do not pass out of the blood-vessels under other circumstances, do pass out whenever the salts accumulate greatly in the fluid which naturally moistens the throat and air-passages. Therefore, whenever a person has breathed unusually cold dry air until that fluid, because of its evaporation, contains much salt, the albuminous part of the blood comes out in the throat or lungs wherever the salty fluid is. Whenever this exudation occurs there is then a chance for the *bacillus tuberculosis* to lodge and multiply, because it is there kept in a nutritive solution at the temperature of the body. (A similar explanation applies to small-pox.) Dr. Baker claims, therefore, that he has shown by statistics that these diseases are controlled by the temperature and dryness of the atmosphere, and that he has pointed out the reasons why. Acknowledging that Dr. Koch has demonstrated that the *bacillus tuberculosis* is the cause of consumption whenever it gains entrance and lodgment in the body, Dr. Baker claims that he has himself discovered the cause of its gaining such lodgment,—in other words that his cause is "the cause that causes the cause" (which Dr. Koch discovered) to be effective in producing the disease.

* The paper, with its tables and illustrative diagrams, is now published on pages 52-78, section XVI, vol. 5, of the Trans. of the International Medical Congress. Through the courtesy of the printers, Wm. F. Fell & Co., Philadelphia, one of the diagrams is printed herewith.—H. B. B., SEC.

No 10. Temperature, and Deaths from Phthisis in London.



Deaths — Average Temperature —
About 291,000 deaths from Phthisis are represented in
this diagram, data for which are from Journal of Scottish Med.
Soc., New Series Nos. XIII, XIV, XV, XVI, pages 252 and 263.